

**STANDARD
FOR
STABILIZATION WITH MULCH ONLY**

Definition

Stabilizing exposed soils with non-vegetative materials exposed for periods longer than 14 days

Purpose

To protect exposed soil surfaces from erosion damage and to reduce offsite environmental damage.

Water Quality Enhancement

Provides temporary mechanical protection against wind or rainfall induced soil erosion until permanent vegetative cover may be established.

Where Applicable

This practice is applicable to areas subject to erosion, where the season and other conditions may not be suitable for growing an erosion-resistant cover or where stabilization is needed for a short period until more suitable protection can be applied.

Methods and Materials

1. Site Preparation

- A. Grade as needed and feasible to permit the use of conventional equipment for seedbed preparation, seeding, mulch application, and mulch anchoring. All grading should be done in accordance with Standards for Land Grading
- B. Install needed erosion control practices or facilities such as diversions, grade stabilization structures, channel stabilization measures, sediment basins, and waterways. See Standards 11 through 42.

2. Protective Materials

- A. Unrotted small-grain straw, at 2.0 to 2.5 tons per acre, is spread uniformly at 90 to 115 pounds per 1,000 square feet and anchored with a mulch anchoring tool, liquid mulch binders, or netting tie down. Other suitable materials may be used if approved by the Soil Conservation District. The approved rates above have been met when the mulch covers the ground completely upon visual inspection, i.e. the inspector cannot see the ground below the mulch.
- C. Synthetic or organic soil stabilizers may be used under suitable conditions and in quantities as recommended by the manufacturer.
- D. Wood-fiber or paper-fiber mulch at the rate of 1,500 pounds per acre (or according to the manufacturer's requirements) may be applied by a hydroseeder.
- E. Mulch netting, such as paper jute, excelsior, cotton, or plastic, may be used.
- F. Woodchips applied uniformly to a minimum depth of 2 inches may be used. Woodchips will not be used on areas where flowing water could wash them into an inlet and plug it.

- G. Gravel, crushed stone, or slag at the rate of 9 cubic yards per 1,000 sq. ft. applied uniformly to a minimum depth of 3 inches may be used. Size 2 or 3 (ASTM C-33) is recommended.
- 3. Mulch Anchoring - should be accomplished immediately after placement of hay or straw mulch to minimize loss by wind or water. This may be done by one of the following methods, depending upon the size of the area and steepness of slopes.
 - A. Peg and Twine - Drive 8 to 10 inch wooden pegs to within 2 to 3 inches of the soil surface every 4 feet in all directions. Stakes may be driven before or after applying mulch. Secure mulch to soil surface by stretching twine between pegs in a criss-cross and a square pattern. Secure twine around each peg with two or more round turns.
 - B. Mulch Nettings - Staple paper, cotton, or plastic nettings over mulch. Use degradable netting in areas to be mowed. Netting is usually available in rolls 4 feet wide and up to 300 feet long.
 - C. Crimper Mulch Anchoring Coulter Tool - A tractor-drawn implement especially designed to punch and anchor mulch into the soil surface. This practice affords maximum erosion control, but its use is limited to those slopes upon which the tractor can operate safely. Soil penetration should be about 3 to 4 inches. On sloping land, the operation should be on the contour.
 - D. Liquid Mulch-Binders
 - 1. Applications should be heavier at edges where wind catches the mulch, in valleys, and at crests of banks. Remainder of area should be uniform in appearance.
 - 2. Use one of the following:
 - a. Organic and Vegetable Based Binders - Naturally occurring, powder based, hydrophilic materials that mixed with water formulates a gel and when applied to mulch under satisfactory curing conditions will form membrane networks of insoluble polymers. The vegetable gel shall be physiologically harmless and not result in a phyto-toxic effect or impede growth of turfgrass. Vegetable based gels shall be applied at rates and weather conditions recommended by the manufacturer.
 - b. Synthetic Binders - High polymer synthetic emulsion, miscible with water when diluted and following application to mulch, drying and curing shall no longer be soluble or dispersible in water. It shall be applied at rates and weather conditions recommended by the manufacturer and remain tacky until germination of grass.